查询USB50803C供应商

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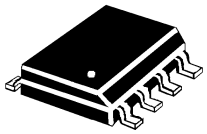
# USB50803C
thru
# USB50824C

**TVSarrayÔ Series**



## DESCRIPTION (500 watt)

This TRANSIENT VOLTAGE SUPPRESSOR (TVS) array is packaged in an SO-8 configuration giving protection to 2 Bidirectional data or interface lines. It is designed for use in applications where protection is required at the board level from voltage transients caused by electrostatic discharge (ESD) as defined in IEC 1000-4-2, electrical fast transients (EFT) per IEC 1000-4-4 and effects of secondary lighting.

These TVS arrays have a peak power rating of 500 watts for an 8/20µsec pulse. This array is suitable for protection of sensitive circuitry consisting of TTL, CMOS DRAM's, SRAM's, HCMOS, HSIC microprocessors, **UNIVERSAL SERIAL BUS (USB)** and I/O transceivers. The USB508XXC product provides board level protection from static electricity and other induced voltage surges that can damage or upset sensitive circuitry.

## FEATURES

- Protects up to 2 Bidirectional lines
- Surge protection Per IEC 1000-4-2, IEC 1000-4-4
- Provides electrically isolated protection
- SO-8 Packaging
- **ULTRA ULTRA LOW CAPACITANCE 3 pF per line pair**
- **ULTRA LOW LEAKAGE**

## MECHANICAL

- Molded SO-8 Surface Mount
- Weight: 0.066 grams (approximate)
- Marking: Logo, device number, date code
- Pin #1 defined by DOT on top of package

## MAXIMUM RATINGS

- Operating Temperatures: -55$^0$C to +150$^0$C
- Storage Temperature: -55$^0$C to +150$^0$C
- Peak Pulse Power: 500 Watts (8/20 µsec, Figure 1)
- Pulse Repetition Rate: <.01%

## PACKAGING

- Tape & Reel EIA Standard 481-1-A
- 13 inch reel 2,500, pieces (OPTIONAL)
- Carrier tubes 95 pcs per (STANDARD)

**ELECTRICAL CHARACTERISTICS PER LINE @ 25$^0$C Unless otherwise specified**

| PARTNUMBER | DEVICE MARKING | STAND OFF VOLTAGE $V_{WM}$ VOLTS | BREAKDOWN VOLTAGE $V_{BR}$ @1 mA VOLTS | CLAMPING VOLTAGE $V_C$ @ 1 Amp (FIGURE 2) VOLTS | CLAMPING VOLTAGE $V_C$ @ 5 Amp (FIGURE 2) VOLTS | LEAKAGE CURRENT $I_D$ @ $V_{WM}$ µA | CAPACITANCE (f=1 MHz) @0V C pF | TEMPERATURE COEFFICIENT OF $V_{BR}$ á$_{VBR}$ mV/°C |
|---|---|---|---|---|---|---|---|---|
| | | MAX | MIN | MAX | MAX | MAX | TYP | MAX |
| USB50803C | 3C | 3.3 | 4 | 8 | 11 | 200 | 3 | -5 |
| USB50805C | 5C | 5.0 | 6.0 | 10.8 | 13 | 40 | 3 | 1 |
| USB50812C | 12C | 12.0 | 13.3 | 19 | 26 | 1 | 3 | 8 |
| USB50815C | 15C | 15.0 | 16.7 | 25 | 32 | 1 | 3 | 11 |
| USB50824C | 24C | 24.0 | 26.7 | 44 | 57 | 1 | 3 | 28 |

**NOTE:** TVS product is normally selected based on its stand off Voltage $V_{WM}$. Product selected voltage should be equal to or greater than the continuous peak operating voltage of the circuit to be protected.

**Application:** The USB508XXC product is designed for transient voltage suppression protection of ESD sensitive components at the board level. It is an ideal product to be used for protection of I/O Transceivers.

# WAVE FORMS

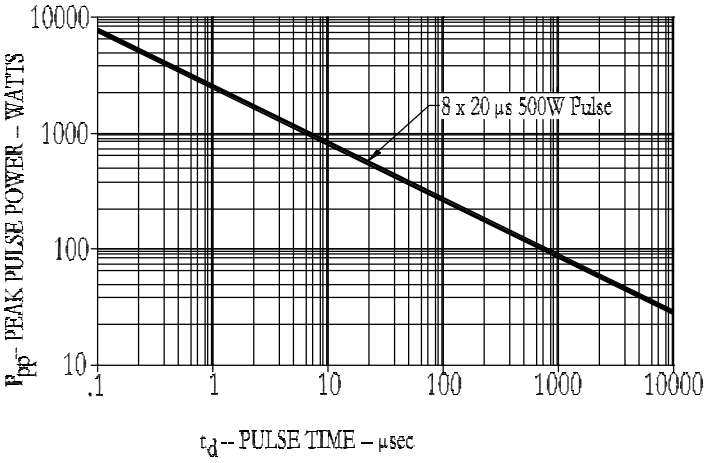



**FIGURE 1**
**Peak Pulse Power Vs Pulse Time**

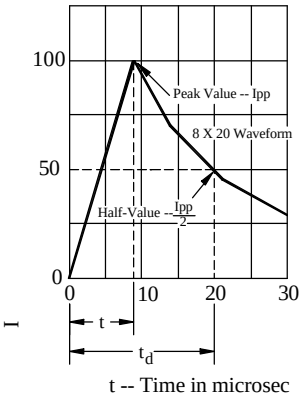
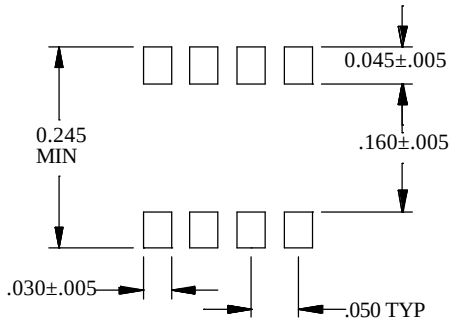
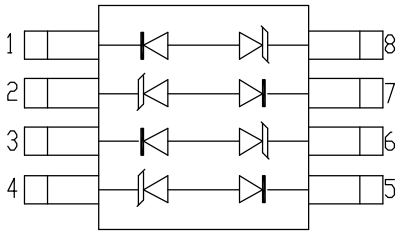



**FIGURE 2**
**Pulse Wave Form**

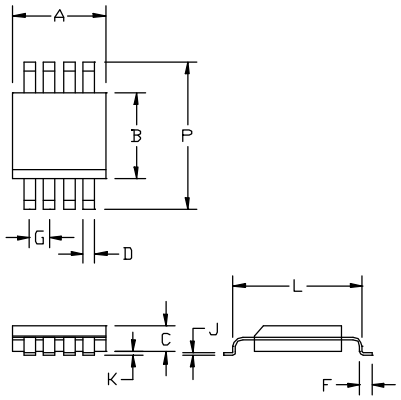
## MOUNTING PAD SO-8




## CIRCUIT DIAGRAM




## SO-8 PACKAGE




| | INCHES | | MILLIMETERS | |
|---|---|---|---|---|
| DIM | MIN | MAX | MIN | MAX |
| A | 0.188 | 0.197 | 4.77 | 5.00 |
| B | 0.150 | 0.158 | 3.81 | 4.01 |
| C | 0.053 | 0.069 | 1.35 | 1.75 |
| D | 0.011 | 0.021 | 0.28 | 0.53 |
| F | 0.016 | 0.050 | 0.41 | 1.27 |
| G | 0.050 BSC | | 1.27 BSC | |
| J | 0.006 | 0.010 | 0.15 | 0.25 |
| K | 0.004 | 0.008 | 0.10 | 0.20 |
| L | 0.189 | 0.206 | 4.80 | 5.23 |
| P | 0.228 | 0.244 | 5.79 | 6.19 |